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PAPER

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UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES

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*Ex parte* JOHANNES HENDRIKUS VAN LITH, JOHANNES HAAIJE  
VAN DER KAMP, and JEROEN HERMAN VAN LIEMPD

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Appeal 2009-003662  
Application 10/619,398  
Technology Center 3600

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Decided: June 29, 2010

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Before JENNIFER D. BAHR, MICHAEL W. O'NEILL, and  
FRED A. SILVERBERG, *Administrative Patent Judges*.

O'NEILL, *Administrative Patent Judge*.

DECISION ON APPEAL

STATEMENT OF THE CASE

Johannes Hendrikus van Lith et al. (Appellants) appeal under 35  
U.S.C. § 134 from the Examiner's decision finally rejecting claims 1, 2, 19,

and 20 under 35 U.S.C. § 102 as anticipated by Natsushiro (JP 63-280946, published Nov. 17, 1988)(translated Nov 13, 2007 by the PTO)<sup>1</sup>; claims 5-18 and 21<sup>2</sup> under 35 U.S.C. § 103 as unpatentable over Natsushiro; and claims 3 and 4 under 35 U.S.C. § 103 as unpatentable over Natsushiro in view of Yagasaki (US 6,110,065, issued Aug. 29, 2000). We have jurisdiction under 35 U.S.C. § 6(b).

We REVERSE.

*The Invention*

Appellants' invention relates to a transverse element for a drive belt within a continuously variable transmission. Spec. 1:6-7.

Claim 1, reproduced below, is illustrative of the subject matter on appeal. (Paragraphing and emphasis added).

1. Transverse element for a drive belt for a continuously variable transmission having two pulleys having an at least partially conical contact surface for pairwise enclosing of the drive belt, each pulley being composed of two pulley sheaves,  
the drive belt comprising two endless carriers and transverse elements which are placed against each other in axial direction of the drive belt, wherein two subsequent transverse elements are tiltable relative to each other about a contact line, and

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<sup>1</sup> The accuracy of the PTO translation is uncontested by Appellants. Accordingly, we rely on the translation relied upon by the Examiner.

<sup>2</sup> Claim 21 will be considered as part of this appeal. The Final Rejection lists claim 21 as being rejected along with claims 5-18. Final Rejection 3. The Appellants argue claim 21 along with claims 5-18 (App. Br. 14, 18). Claim 21, however, has been omitted from the statement of the rejection in the Grounds of Rejection section of the Examiner's Answer (Ans. 3). We deem the omission to be an inadvertent error.

wherein the transverse elements on both sides are provided with a supporting surface for supporting a carrier, which supporting surface transforms into a pulley sheave contact surface being designed to abut against a contact surface of a pulley sheave,

wherein a convex transition region is defined between the supporting surface and the pulley sheave contact surface and interconnects the supporting surface and the pulley sheave contact surface, and

*wherein the transition region comprises two parts having different curvature radii,*

*wherein a first curvature radius of a first part at the side of the supporting surface is larger than a second curvature radius of a second part at the side of the pulley sheave contact surface.*

## OPINION

### *Issue*

The determinative issue in this appeal is:

Has the Examiner erred in interpreting Natsushiro's figures in order to find that Natsushiro anticipates the claimed feature of a convex transition region on a transverse element that is composed of two parts having different radii of curvature?

*Pertinent Facts*

FF1. Figure 4a, reproduced below, illustrates the details of the claimed convex transition region of the transverse element disclosed within the Specification.

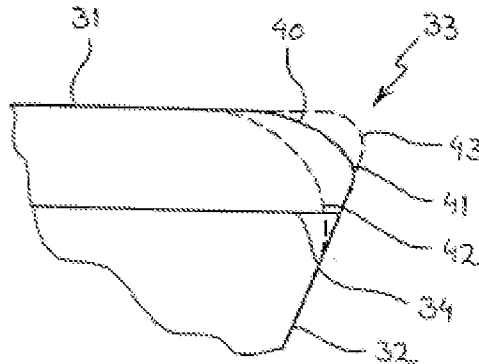
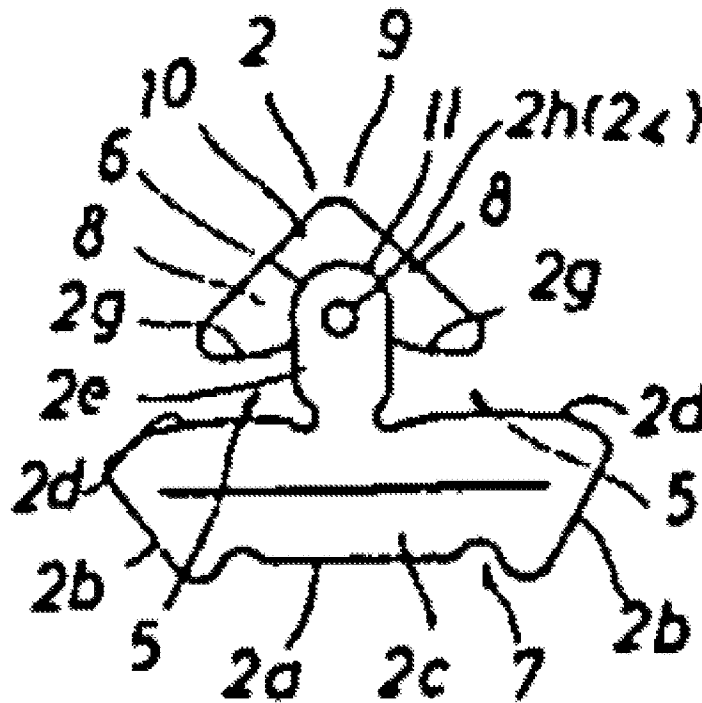


Figure 4a depicts the convex transition region 33 of the transverse element.

FF2. As shown in Figure 4a, reproduced *supra*, the convex transition region 33 of the transverse element 23 is composed of two parts 40 and 41. The first part 40 of the transition region 33 is situated on the side that contacts the support surface 31. Support surface 31 supports the components of the endless drive belt. *See* fig. 3A, reference numerals 20-22. The second part 41 of the transition region 33 is situated on the side that contacts the pulley sheave contact surface 32.

FF3. The Specification discloses that the first part 40 has a first radius of curvature and the second part 41 has a second radius of curvature. The Specification further discloses that the first radius of curvature is larger than the second radius of curvature. Spec. 5:18-21. As such, the transition region 33 that joins the support surface 31 and pulley sheave contact surface 32 is a compound curve having a series of two successive tangent circular arcs or, as disclosed, two different curvature radii.

FF4. Natsushiro's Figure 1, reproduced below with 400% magnification, illustrates the metal block 2 (transverse element, Appellants' nomenclature).



Natsushiro's Figure 1 depicts a disclosed metal block 7.

FF5. Natsushiro describes the portions of the metal block 7 that are designated with the reference label "2d" as the lower saddle parts. *See* Natsushiro, p. 9, l. 12. The endless belt 3 (metal loop, Natsushiro's nomenclature) contacts the lower saddle parts. *See* figs. 10 and 11.

FF6. Natsushiro describes the portions of the metal block that are designated with the reference label "2b" as the inclined surfaces. *See* Natsushiro, p. 9, l. 11.

FF7. The Natsushiro translation provided by the Examiner fails to describe the radius of curvature of any portion of the metal block.

*Principles of Law*

A determination of anticipation, as well as obviousness, involves two steps. First is construing the claim, a question of law, followed by, in the case of anticipation or obviousness, a comparison of the construed claim to the prior art. *Key Pharms. v. Hercon Labs. Corp.*, 161 F.3d 709, 714 (Fed. Cir. 1998) (citations omitted). During examination of a patent application, pending claims are given their broadest reasonable construction consistent with the specification. *In re Prater*, 415 F.2d 1393, 1404-05 (CCPA 1969); *In re Am. Acad. of Sci. Tech Ctr.*, 367 F.3d 1359, 1364 (Fed. Cir. 2004).

“Anticipation is established only when a single prior art reference discloses, expressly or under the principles of inherency, each and every element of a claimed invention.” *RCA Corp. v. Applied Digital Data Sys., Inc.*, 730 F.2d 1440, 1444 (Fed. Cir. 1984). In other words, “[t]here must be no difference between the claimed invention and the reference disclosure, as viewed by a person of ordinary skill in the field of the invention.” *Scripps Clinic & Research Found. v. Genentech, Inc.*, 927 F.2d 1565, 1576 (Fed. Cir. 1991).

Description via drawings and pictures can be relied upon alone as well as by words to anticipate claimed subject matter if they clearly show the structure claimed. *In re Mraz*, 455 F.2d 1069, 1072 (CCPA 1972). However, patent drawings not designated as being drawn to scale cannot be relied upon to define precise proportions of elements if the specification is completely silent on the issue. *Hockerson-Halberstadt, Inc. v. Avia Group Intl, Inc.*, 222 F.3d 951, 956 (Fed. Cir. 2000). That does not mean, however, “that things patent drawings show clearly are to be *disregarded*.” *Mraz*, 455 F.2d at 1072.

While references are evaluated and applied on the basis of what they reasonably disclose and suggest to a person skilled in the art, *In re Aslanian*, 590 F.2d 911, 914 (CCPA 1979) (citing *In re Baum*, 374 F.2d 1004, 1009 (1967)), it is also necessary to properly construe what an applied reference *fairly* teaches or discloses. *See, e.g., In re Fracalossi*, 681 F.2d 792 (CCPA 1982) (reference is prior art not only for specifically disclosed embodiments, but also all that it fairly teaches).

### *Analysis*

#### *Claim construction*

The claims, when properly construed in light of the Specification, require that the transverse element at least have two surfaces, a support surface and a pulley sheave contacting surface, connected by a transition region. Claim 1, Claim 21, FF1, and FF2. As claimed and disclosed, the transition region is composed of two parts having different radii, i.e., two different curvature radii. FF3.

#### *Comparison of the properly construed claim to Natsushiro*

For Natsushiro to anticipate the claimed invention, Natsushiro, as viewed by a person having ordinary skill in the art, has to disclose a transition region as having two different curvature radii. Since Natsushiro's written description does not expressly disclose a transition region as having two different curvature radii, *see* FF7, and the Examiner has not relied on a theory of inherency, Natsushiro's drawings have to clearly show a transition region having two different curvature radii in order to anticipate this claimed feature.

In this case, Natsushiro does not clearly show the transition region, the intersection of surfaces 2b and 2d, as having a transition region with two



different curvature radii. We have magnified the view of Natsushiro to 400%. As shown in FF4, the region, i.e., the surface that connects surfaces 2d and 2b, which can be fairly characterized as the transition region, does not clearly show two different radii of curvature.

*Examiner's characterization of Natsushiro*

The Examiner, relying on surface 2d as the transition region, is inconsistent as to how a person having ordinary skill in the art would understand Natsushiro. The record evidences that surface 2d is a surface for supporting the endless belt 3 (metal hoop, Natsushiro's nomenclature). FF5. The fact that Natsushiro discloses this surface as a "lower saddle portion" bolsters the position that a person of ordinary skill in the art would not consider this surface to be a transition region since a customary meaning of "saddle" is "a device mounted as a support and often shaped to fit the object held."<sup>3</sup> As such, the proper understanding of what Natsushiro fairly discloses is a surface that supports the endless belt 3 and not a surface that transitions the metal block 7 (transverse element, Appellants' nomenclature) from a support surface for the endless belt to a support surface for a pulley sheave (inclined surfaces, Natsushiro's nomenclature, *see* FF6).

## CONCLUSION

In view of the foregoing, the Examiner erred in interpreting Natsushiro's figures in order to find that Natsushiro anticipates the claimed feature of a convex transition region on a transverse element that is composed of two parts having different radii of curvature. The rejections of claim 1, 2, 19, and 20 under 35 U.S.C. § 102, as well as the rejections of

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<sup>3</sup> MERRIAM WEBSTER'S COLLEGIATE DICTIONARY, 1029 (10<sup>th</sup> ed.1999).

Appeal No. 2009-003662  
Application No. 10/619,398

claims 3-18 and 21 under 35 U.S.C. § 103, are grounded in part on this flawed finding. Accordingly, the Examiner's rejections cannot be sustained.

### DECISION

The Examiner's decision to reject claims 1-21 as either anticipated or obvious is reversed.

### REVERSED

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